AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1 (currently amended): A semiconductor device, comprising:

a semiconductor substrate;

a low dielectric constant film ~~constituted~~ consisting essentially of a ladder-type hydrogen siloxane provided on said semiconductor substrate;

a protection film consisting essentially of a silicon oxide film provided on said low dielectric constant film; and

a metal interconnect formed in said low dielectric constant film and said protective film.

2. (original): The semiconductor device as recited in Claim 1,

wherein said protection film is constituted of a material having greater polishing resistance against a chemical mechanical polishing process than said low dielectric constant film.

Claim 3 (canceled).

4. (currently amended): ~~The semiconductor device as recited in Claim 1,~~ A semiconductor device, comprising:

a semiconductor substrate;

a low dielectric constant film constituted essentially of a ladder-type hydrogen siloxane provided on said semiconductor substrate wherein said ladder-type hydrogen siloxane has a refractive index not less than 1.38 but not greater than 1.40 at a wavelength of 633 nm;

a protection film provided on said low dielectric constant film; and

a metal interconnect formed in said low dielectric constant film and said protective film.

5. (currently amended): ~~The semiconductor device as recited in Claim 1,~~ A semiconductor device, comprising:

a semiconductor substrate;

a low dielectric constant film constituted essentially of a ladder-type hydrogen siloxane provided on said semiconductor substrate wherein said ladder-type hydrogen siloxane has a density not less than 1.50g/cm^3 but not greater than 1.58g/cm^3;

a protection film provided on said low dielectric constant film; and

a metal interconnect formed in said low dielectric constant film and said protective film.

6. (original): The semiconductor device as recited in Claim 1,

wherein a plurality of said metal interconnects is provided so as to form an isolated region where one of said plurality of metal interconnects is separately located and a concentrated region where the other metal interconnects are closely disposed to one another.

7. (currently amended): ~~The semiconductor device as recited in Claim 6,~~ A semiconductor device, comprising:

a semiconductor substrate;

a low dielectric constant film constituted essentially of a ladder-type hydrogen siloxane provided on said semiconductor substrate;

a protection film provided on said low dielectric constant film; and

a plurality of metal interconnects formed in said low dielectric constant film and said protective film wherein said plurality of metal interconnects is provided so as to form an isolated region where one of said plurality of metal interconnects is separately located and a concentrated region where the other metal interconnects are closely disposed to one another, and

wherein said plurality of metal interconnects in the concentrated region is disposed such that an interval between substantially parallel portions of neighboring metal interconnects is not greater than a double of a width of the respective metal interconnects.

8. (currently amended): ~~The semiconductor device as recited in Claim 1,~~ A semiconductor device, comprising:

a semiconductor substrate;

a low dielectric constant film constituted essentially of a ladder-type hydrogen siloxane provided on said semiconductor substrate;

a protection film provided on said low dielectric constant film wherein said protection film is formed such that a film thickness thereof at its thickest portion is in a range of 10% to 30% of a film thickness of said low dielectric constant film at its thickest portion; and

a metal interconnect formed in said low dielectric constant film and said protective film.

9. (withdrawn): A method of manufacturing a semiconductor device comprising:

forming a low dielectric constant film constituted essentially of a ladder-type hydrogen siloxane on a semiconductor substrate;

forming a protection film on said low dielectric constant film;

forming a metal interconnect in said low dielectric constant film and said protection film; and

polishing said metal interconnect with said protection film provided on said low dielectric constant film.

10. (withdrawn): The method as recited in Claim 9, further comprising:

forming an interlayer insulating film on said protection film after polishing said metal interconnect;

polishing and planarizing said interlayer insulating film; and

repeating the respective steps to thereby form a multilayer interconnect structure.

11. (new): The semiconductor device as recited in Claim 1,

wherein said ladder-type hydrogen siloxane has a refractive index not less than 1.38 but not greater than 1.40 at a wavelength of 633 nm.

12. (new): The semiconductor device as recited in Claim 1,

wherein said ladder-type hydrogen siloxane has a density not less than 1.50g/cm^3 but not greater than 1.58g/cm^3.

13 (new): The semiconductor device as recited in Claim 6,

wherein said plurality of metal interconnects in the concentrated region is disposed such that an interval between substantially parallel portions of neighboring metal interconnects is not greater than a double of a width of the respective metal interconnects.

14 (new): The semiconductor device as recited in Claim 1,

wherein said protection film is formed such that a film thickness thereof at its thickest portion is in a range of 10% to 30% of a film thickness of said low dielectric constant film at its thickest portion.

AMENDMENTS TO THE DRAWINGS

Please amend Figures 1A and 1B to recite "Figure 1A Prior Art" and "Figure 1B Prior Art" as indicated in the annotated sheet and in the replacement sheet of drawings.

Attachment: Annotated Sheet
Replacement Sheet